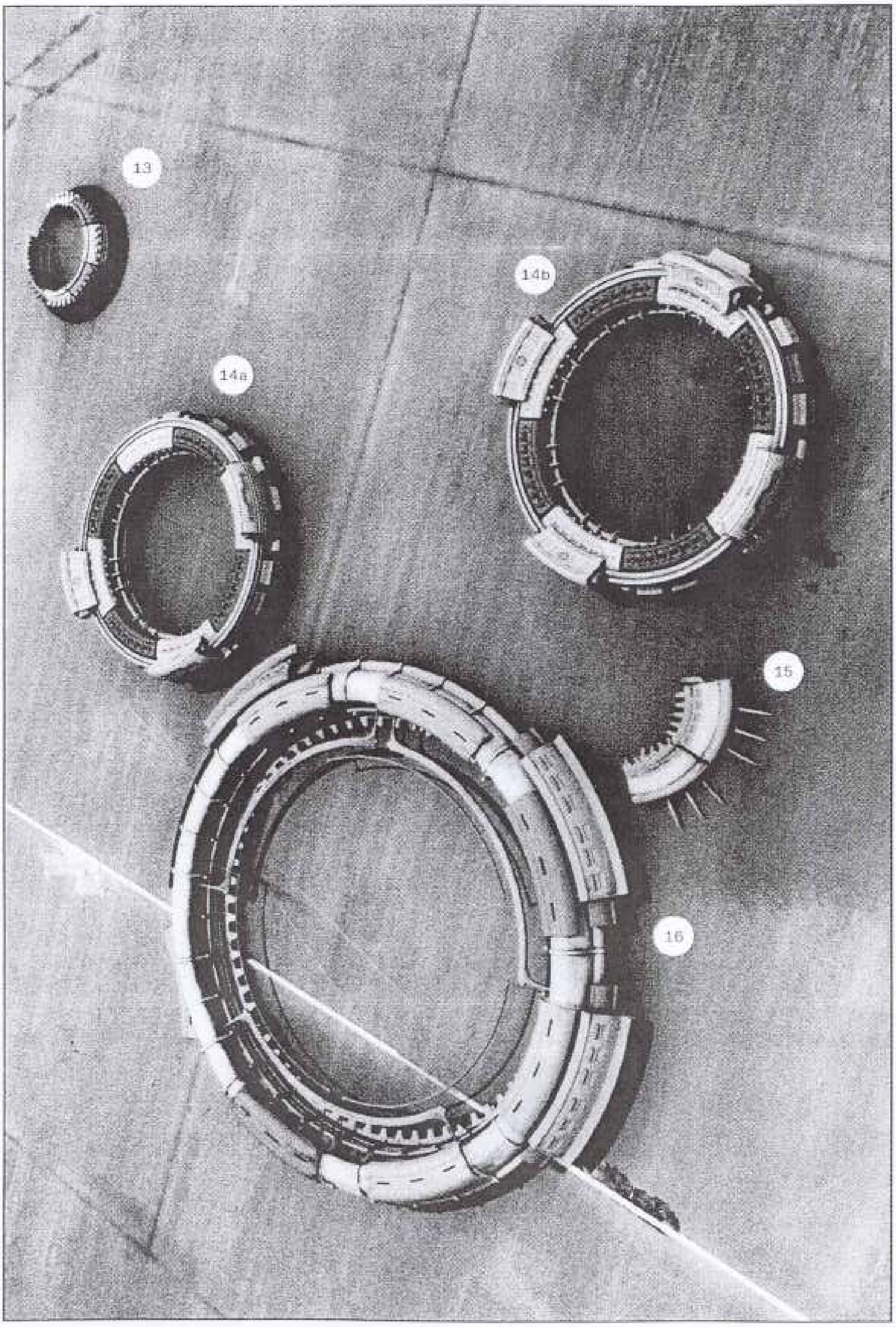
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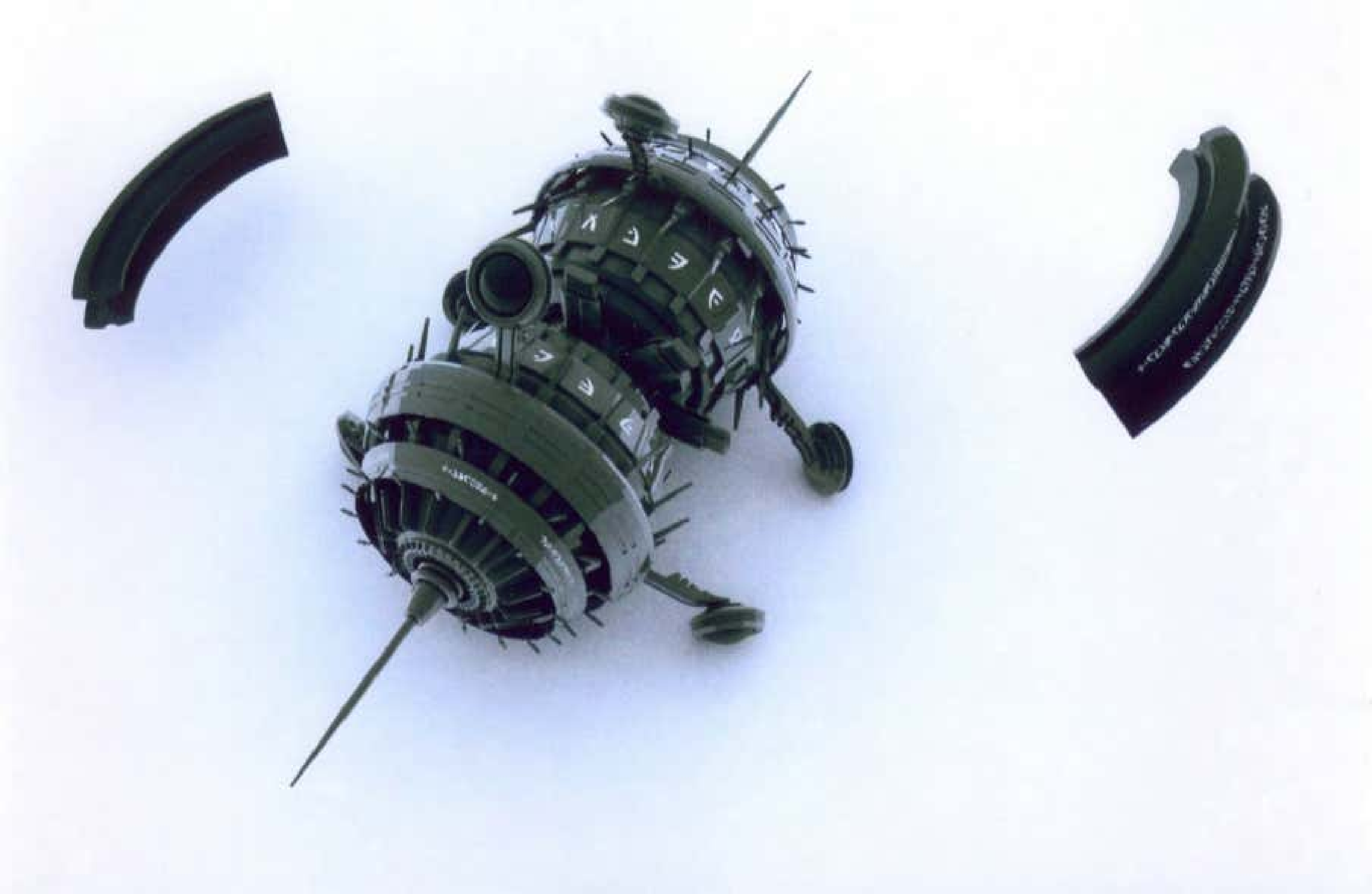

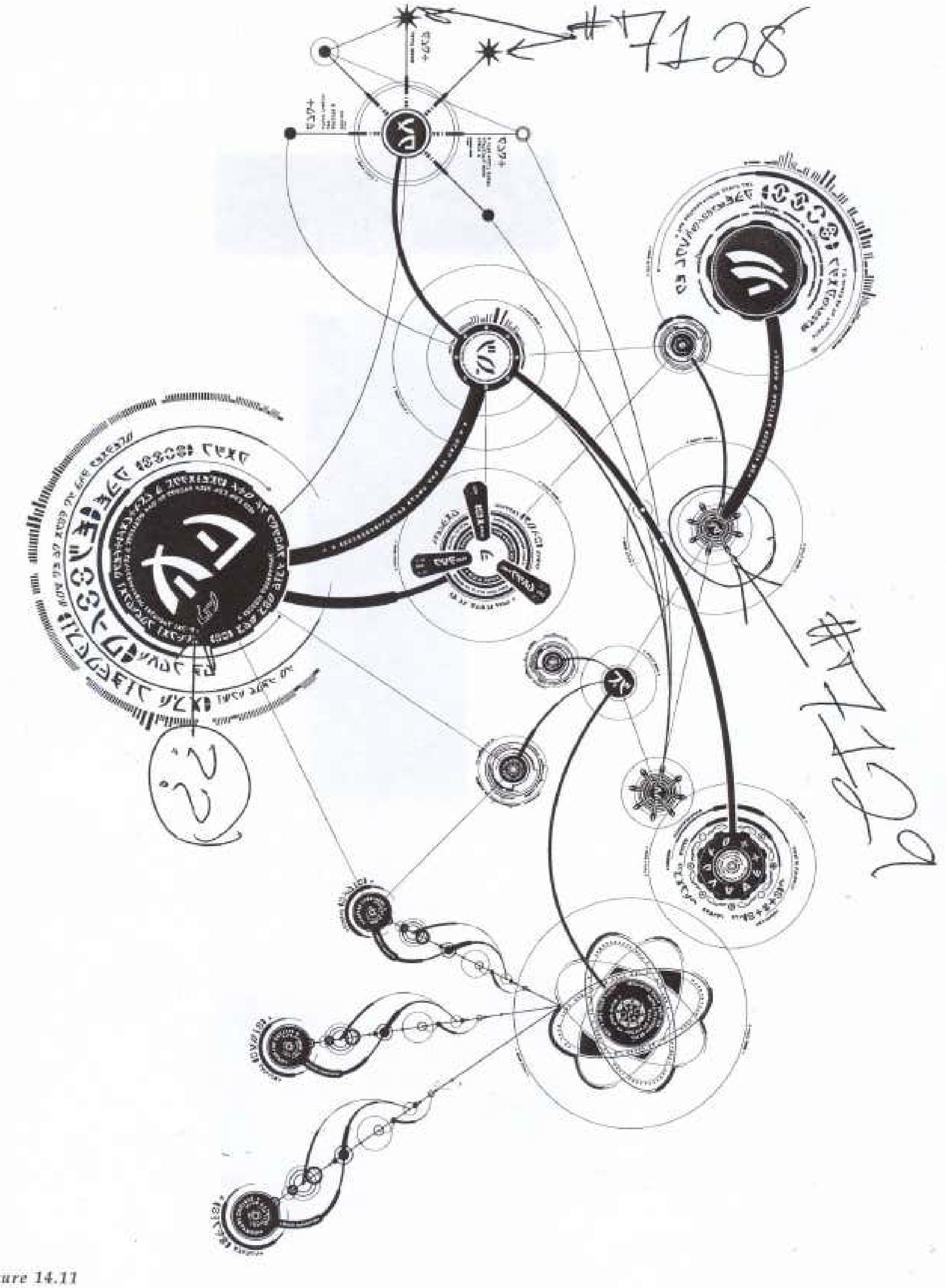

Figure 14.11
Full view of diagram D39-08-117c.

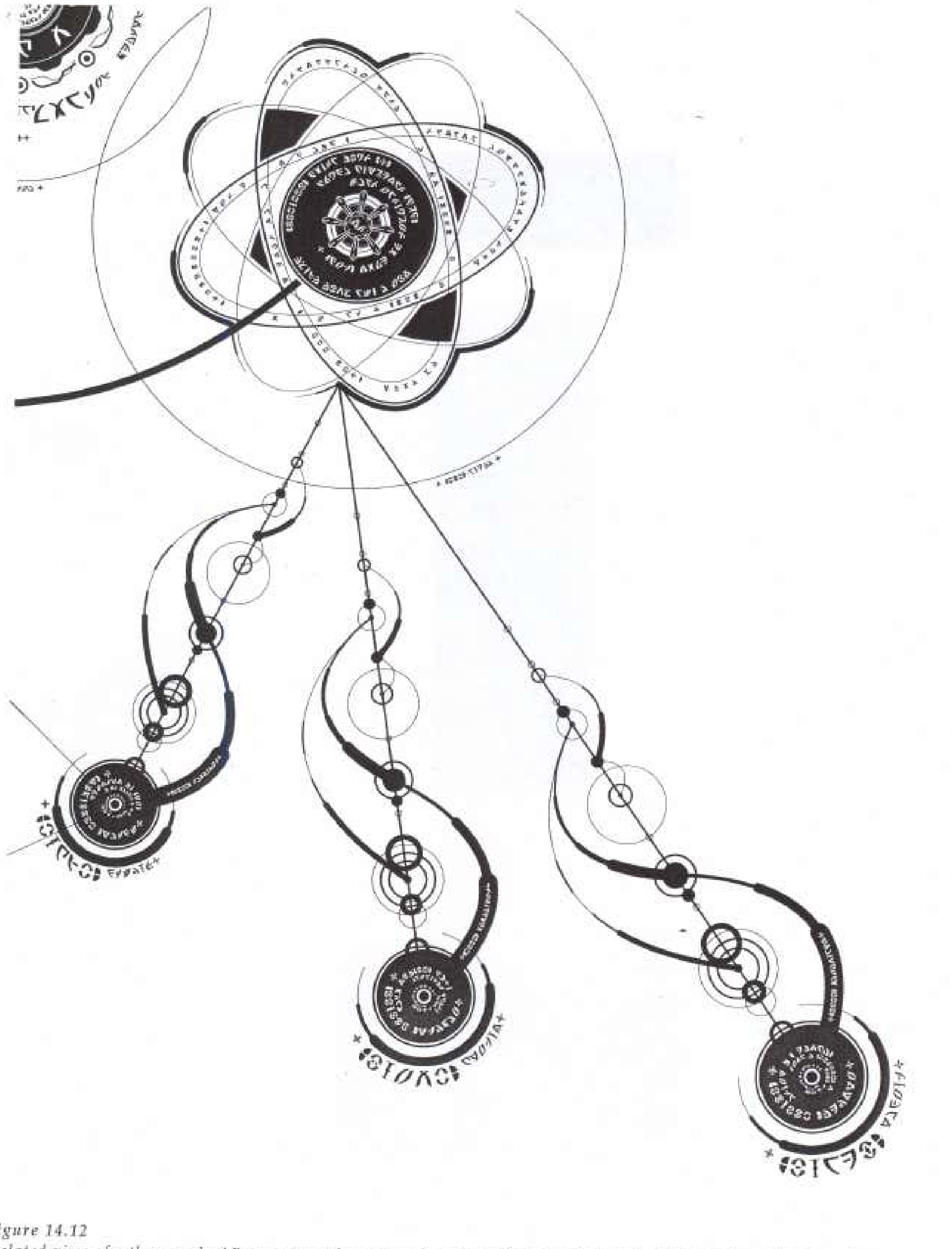

Figure 14.12
Isolated view of a three-node AB-type semaphore cascade, extending from an exterior vertex of an octal junction.

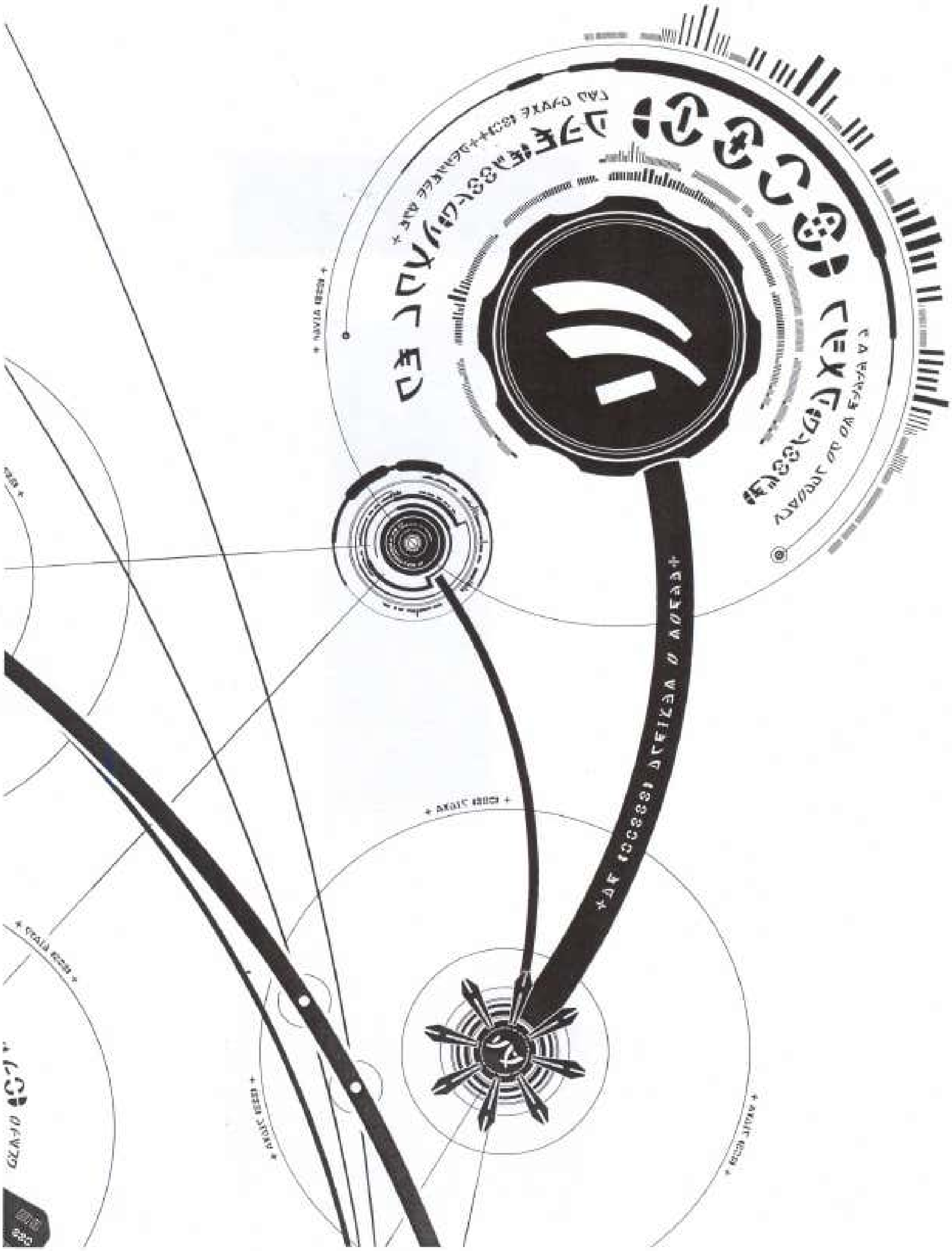

Figure 14.13
Rotary junction with orbital sub-junction connecting to an octal switch.

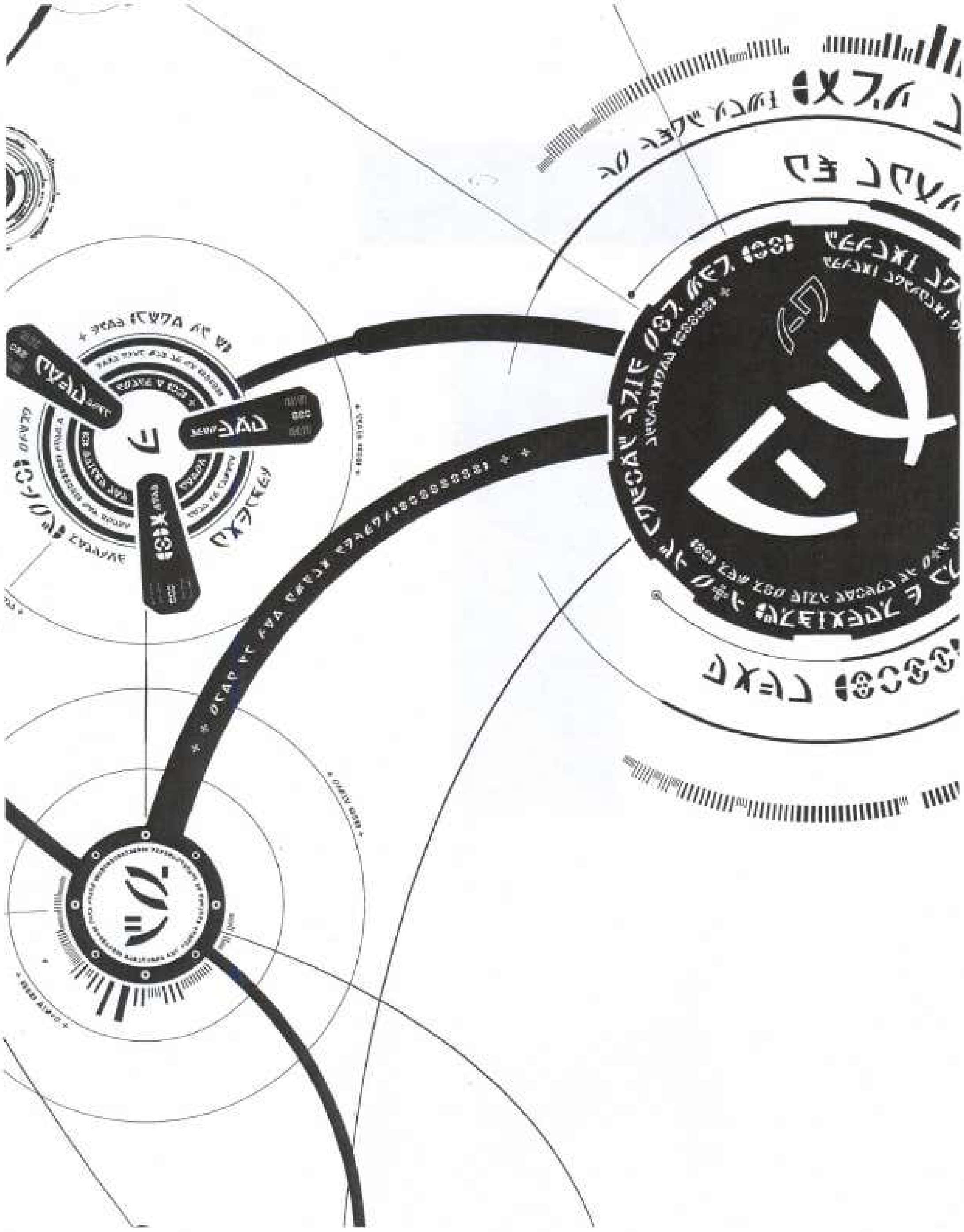

Figure 14.14
Compound junction in a dual-link union with heavy-state tri-switch and diffuser.

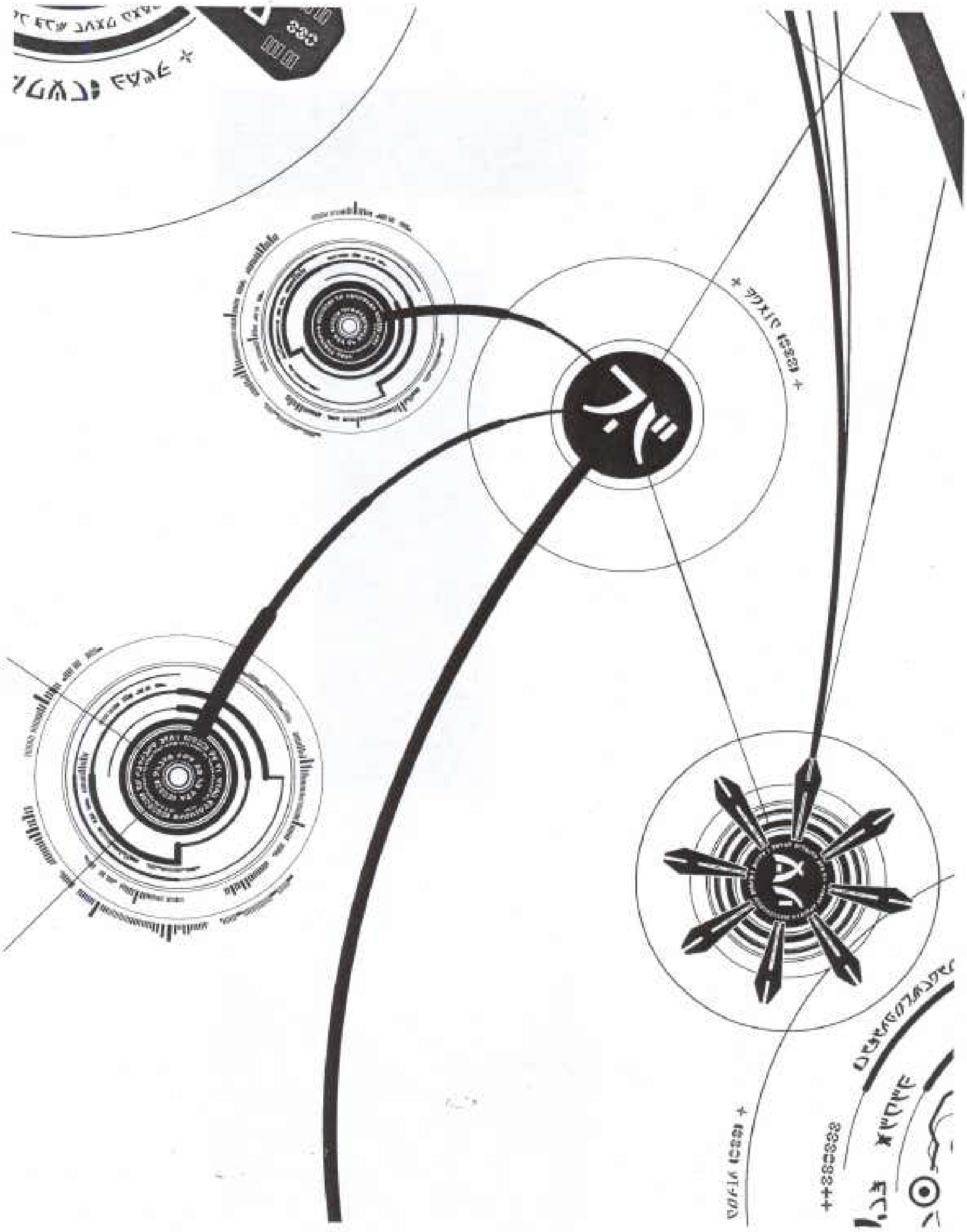

Figure 14.15
Parent junction with three non-orbital child junctions.

1. OVERVIEW

This document is intended as a primer on the tentative findings of the Q4 1986 research phase (referred to herein as "Q4-86") at the Palo Alto CARET Laboratory (PACL). In accordance with the CARET program mission statement, the goal of this research has been achieving a greater understanding of extraterrestrial technology within the context of commercial applications and civilian use. Examples of such applications, in no particular order, include transportation, medicine, construction, energy, computing and communication. The ultimate goal of this research is to provide a core set of advanced technologies in a condition suitable for patent review.

2. EXTRACTION

The process of converting raw artifacts of extraterrestrial origin to usable, fully-documented human technology is termed *extraction*. The extraction process ultimately consists of two phases: first is the establishment of a complete theoretical and operational understanding of the artifact, and second is a distillation of the artifact's underlying principles into a usable, product-oriented technology. Suggestions of specific product applications on behalf of PACL have been encouraged, but are not considered mandatory or essential.

The results of a successful extraction are collected in what is termed an *extraction package* (EP), which should include the following:

1. Complete theoretical and operational overview
2. Assessment and summary of compositional materials
3. At least three (3) working prototypes, demonstrating multiple instances of successful, repeatable and reliable implementation
4. Assembly notes and BOM

At the time of this writing, a fully successful extraction has not yet been achieved, although numerous threads of research are showing promise.

Comprehensive documentation of PACL's extraction process can be found in document PACL-D0006, entitled "PACL Extraction Procedure Guide".

3. EXECUTIVE SUMMARY OF Q4-86

Q4-86 focused on four key subjects, all of which were based on artifacts of extraterrestrial origin obtained from crash site recovery operations conducted during the last two decades within the continental United States. These subjects are:

1. "Personal" antigravity generator (so-named for its small, portable size)
2. Three-dimensional image recorder/projector

3. A complex system of symbols and geometric constructs capable of both defining the functionality of certain artifacts as well as manipulating their behavior, crudely analogous to a computer programming language but without the need for a compilation or interpretation phase.
4. [redacted]

4. RESEARCH SUBJECT: "PERSONAL" ANTIGRAVITY

Antigravity technologies are among the most ubiquitous recovered from extraterrestrial crafts. While antigravity is most commonly associated with propulsion, the principles underlying the technology extend into a far broader domain; indeed, virtually all aspects of most extraterrestrial craft seem to incorporate its use in some way. A prominent example is the seemingly impenetrable field, of controllable diameter and attenuation, surrounding the craft that protects it from weather conditions and the surrounding environment, as well as debris, and, unsurprisingly, ballistic weaponry. Additional examples include dampening of G-force on passengers and on-board equipment, movement of doors and hatches (or their closest equivalents), and even placement of fixtures (such as control consoles, or their closest equivalents) within a given space. Perhaps most startling is the fact that the very components within a given extraterrestrial craft appear to be held in place, in relation to one another, exclusively by antigravitational means. This is a partial explanation for the commonly noted lack of rivets and adhesives in the construction of these crafts.

PACL aims to translate this technology into a product-oriented EP capable of direct application within the consumer market. However, since the sudden emergence of such radically advanced technology would undoubtedly yield destructive consequences, PACL recommends a strategy of incremental dissemination in which deliberately downgraded versions of the original technology are released over a period of years or decades to soften the impact of integration with existing infrastructures, in technological, economic and social terms.

4.1. WHAT IS PERSONAL ANTIGRAVITY?

Not all recovered extraterrestrial technologies are equal, and many previous experiments on antigravity have been performed on cumbersome artifacts suffering from enormous form factors and impractical weights. An ironic consequence of these previous generations of experimentation is that many man-made aircraft that would be otherwise ideal for antigravity propulsion models are incapable of supporting the weight of the device before its gravity-canceling effects are activated. This has lead to many clumsy and accident-prone solutions, such as using a second antigravity generator to load and position the first within the aircraft before activation and takeoff, and then repeating the process in reverse after landing but before deactivation. Despite some minor successes in narrowly-defined domains, these approaches are obviously not acceptable in the long term.

Recently, however, a rather different implementation of antigravity technology has appeared, undoubtedly the product of a different, and presumably more advanced source. [redacted] it can produce gravity-canceling effects of magnitudes comparable to existing artifacts in a package less than two feet across and weighing less than five pounds.

PACL has termed this technology "personal antigravity", as its virtually negligible weight and dimensions suggest applications as focused as antigravity generation for a *single* human user. Early experiments suggest, however, that despite its remarkable precision and focus, this technology is equally effective when broadened to deal with massive payloads of arbitrary scales.

4.2. OVERVIEW OF RECOVERED ANTIGRAVITY ARTIFACTS

4.2.1. KEY ARTIFACTS

PACL has conducted the brunt of its antigravity research on three key artifacts. The first is what PACL considers to be an "antigravity generator" (seen in figure 4.1), a device that appears to provide a "source" of antigravity that can then be projected onto or harnessed by other components within the craft. The second two artifacts are curved I-beam segments (seen in figure 4.2) that, when placed anywhere within a certain radius of the generator during a specific mode of its operation, immediately fly into what is presumed to be their relative positions within the original construction of the craft.

The generator artifact is assigned the identification code *A1*. The I-beam artifacts are assigned identification codes *A2* and *A3*.

4.2.2. SECONDARY ARTIFACTS

Additionally, PACL has been provided with a small, [redacted]evice capable of controlling A1 by activating and deactivating it, as well as switching between its three primary modes of operation. This device, assigned the identification code *S1*, is of particularly sensitive importance, as it is the only known method of controlling A1. [redacted]

4.2.3. RIGID SPATIAL RELATIONSHIPS

Unlike the more general-purpose antigravity fields generated by implementations of this technology obtained from other sources, A1 is capable of multiple modes of operation and varying levels of precision. Perhaps the most compelling aspect of A1's functionality is its ability to focus its antigravitational effects on specific objects, rather than entire spatial volumes, creating what PACL has termed a *rigid spatial relationship* (RSR).

An RSR can be thought of as creating an "implicit solid" between two or more constituent parts separated by empty space. Once in effect, these constituent parts behave as if they

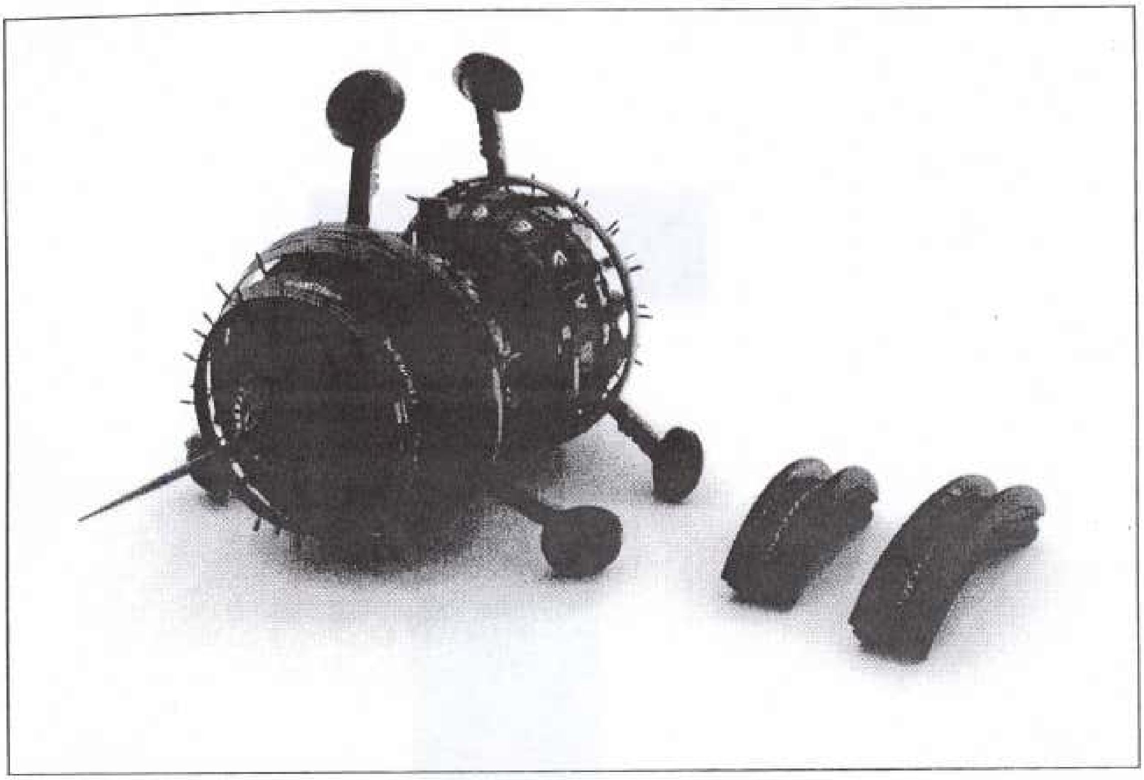

Figure 4.1
The artifacts used by PACL during the antigravity research phase of Q4-86.

are directly and physically linked, and are completely inseparable by pulling or pushing them in opposing directions. Only when the effect of A1 is deactivated will they once again behave as separate objects.

As an example, imagine cutting a broomstick into two segments, each one foot in length. Once separated, each segment is its own object, capable of being moved or rotated independently of the other. Under the effect of an RSR, however, the segments might behave as if they were a three-foot rod consisting of both foot-long broomstick segments separated by an additional foot of empty space. While the two rod segments would still appear to be separate, to the point that an observer would be able to pass their hand through the space that separates them, they would be unable to move one of the rods without the other behaving as if it were directly attached.

4.2.4. OVERVIEW OF A1

A1 consists of a two-segment cylindrical core, 1 foot, 2.2 inches in length and 8.3 inches in diameter, with needle-like appendages extending from each end. The total length of the device, with needles included, is 2 feet, 2.4 inches. Both core segments feature a triangular array of three "arms", extending 7.6 inches from the center of the core,

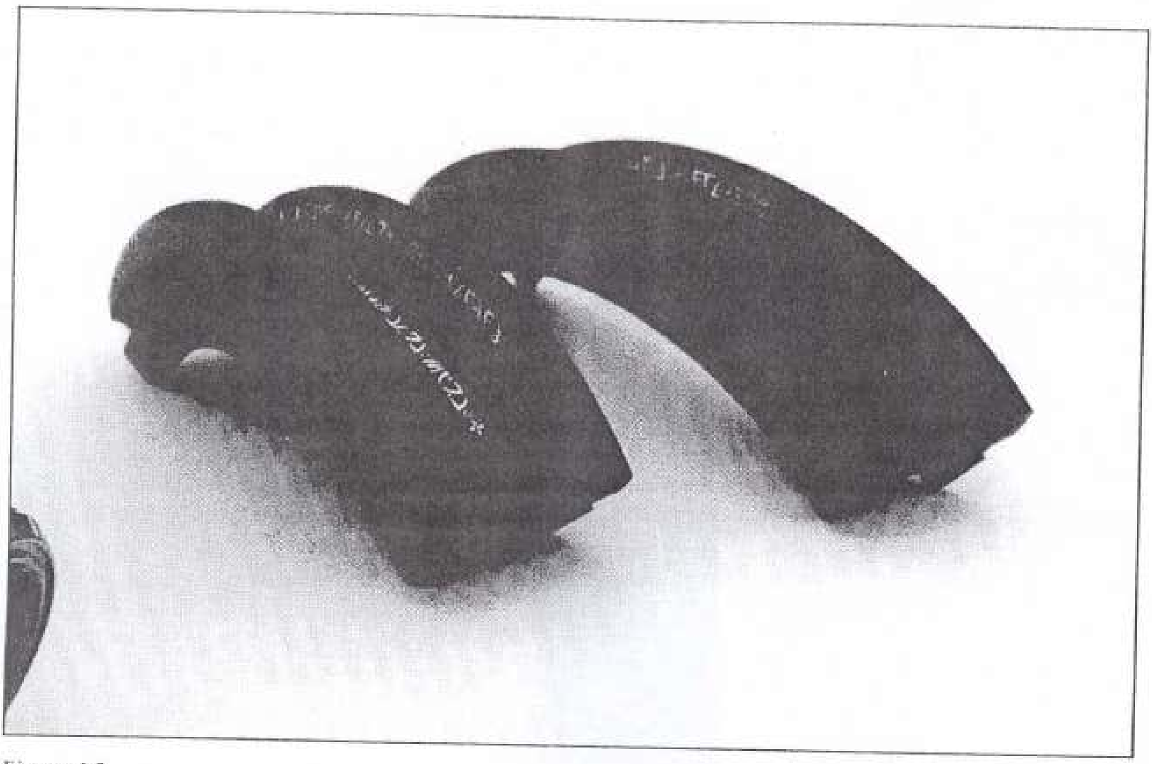

Figure 4.2
Close-up shot of the I-beam segments.

each of which end in a circular "pad" with a diameter of 2 inches. The device weighs approximately 4 pounds, 3 ounces.

Research on the internal functionality of A1 began late in Q4-86, and as such, little is currently known. What is certain, however, is that the device contains no moving parts whatsoever, does not feature any kind of control interface in the form of buttons, switches, or levers, and, apparently, can only be manipulated by the technology contained in S1. According to the limited data to which PACL has been given access in regards to the placement and housing of A1 within the original craft, A1 was one of a pair of identical generators, together responsible for all antigravity-related functionality, from propulsion of the craft itself to placement of all components within the craft's internal design. From this information, as well as experiments conducted with S1, it has been discovered that A1 operates in one of at least three modes of operation:

1. *Field mode.* A1 generates a field of (presumably) arbitrary size and any shape that can be expressed as a convex volume. Within this field, gravity is effectively redefined with any desired strength and orientation. The parameters of this mode, including the shape of the field itself, are defined by [redacted] S1. Surprisingly, A1 does not appear capable of generating a field with any degree of concavity, nor can the strength or orientation of the artificial gravity within the field vary from one point to another. An example of

field mode would be creating a controlled gravity environment within an aircraft or spacecraft for passengers and cargo.

2. *Component mode.* Rather than generating a general-purpose field of constant gravity control, A1 will manipulate the gravitational effect on specific objects, allowing them to take any position or orientation relative to its own centroid. Component mode appears to be used commonly for maintaining the physical construction of a craft's design. Rather than attaching a craft's components to one another by way of rivets, adhesives, welding or the like, they are simply held in place, quite precisely, by antigravitational means. Unlike field mode, PACL has not yet been successful in controlling the parameters or data that drive this mode. S1 does not appear capable of controlling this mode beyond activating or deactivating it. Once in effect, the details of which components are affected, and how, seem to be provided by the components themselves. See the following section for more information. Component mode is responsible for the RSR effect described in the previous section and depicted in figure 4.4.
3. *Multi mode.* A1 combines the functionality of the field and component modes, producing specific antigravity effects on individual components while also generating any number of general-purpose gravity control fields. The same limitations that apply to the field generated in field mode apply to fields generated in this mode as well, but the ability to create multiple fields of differing parameters allows those limitations to be effectively circumvented in most situations. It is believed that this mode was used most commonly for managing the antigravitational needs of the original craft.

4.2.5. OVERVIEW OF A2 AND A3

On their own, A2 and A3 appear to be completely non-functional segments of a curved I-beam (seen in in figure 4.3). However, when A1 is switched into component mode, their position and orientation in relation to A1's centroid are precisely enforced with an RSR (seen in figure 4.4).

A2 and A3 are primarily differentiated by their lengths, which are 7.2 inches and 9.1 inches, respectively. Despite the difference in their lengths, both artifacts weigh approximately 2.6 ounces.

While initial experimentation indicated that the artifacts were composed of a consistent, solid material, experiments on A1's component mode suggest that the artifacts are more internally complex, somehow containing information that describes their position and orientation in relation to A1 when the mode is in effect. Whether or not they possess additional functionality beyond the storage of this information is currently unknown, but is considered likely due to their otherwise ambiguous purpose within the craft's design.

[redacted]

[redacted]

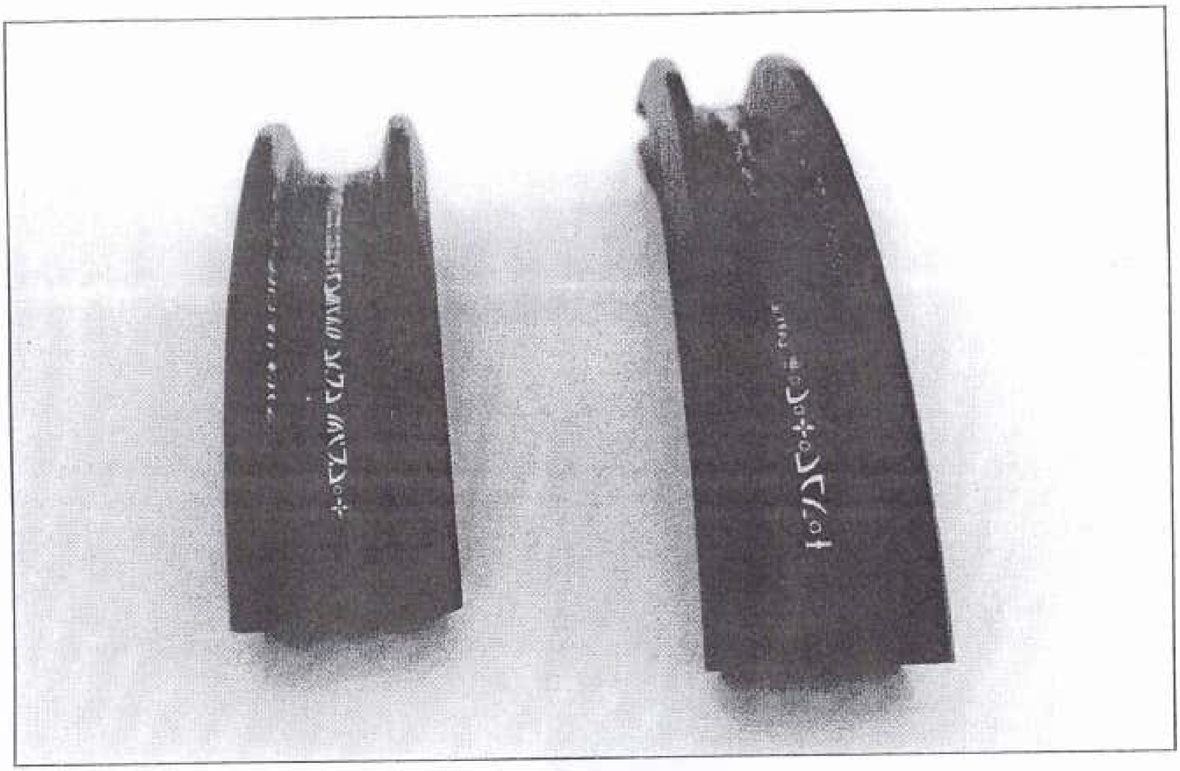

Figure 4.3
Top-view shot of the I-beam segments.

[redacted]

[redacted]

[redacted]

[redacted]

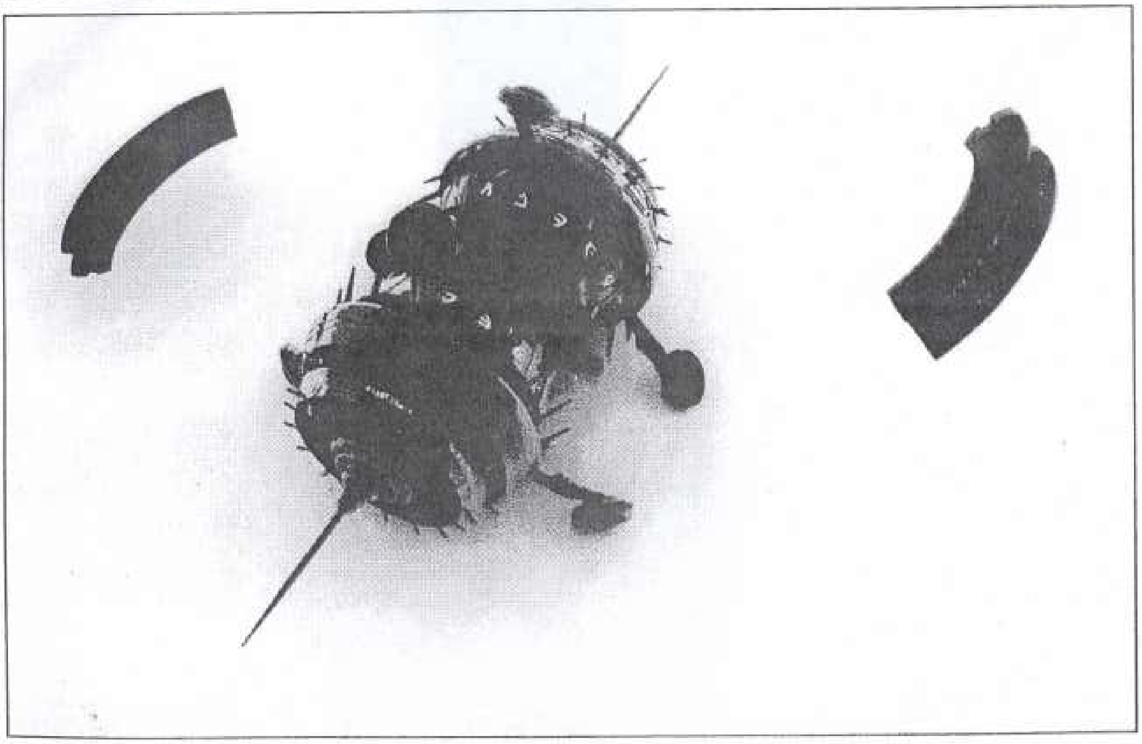

Figure 4.4
I-beam segments linked to the antigravity generator in an RSR.

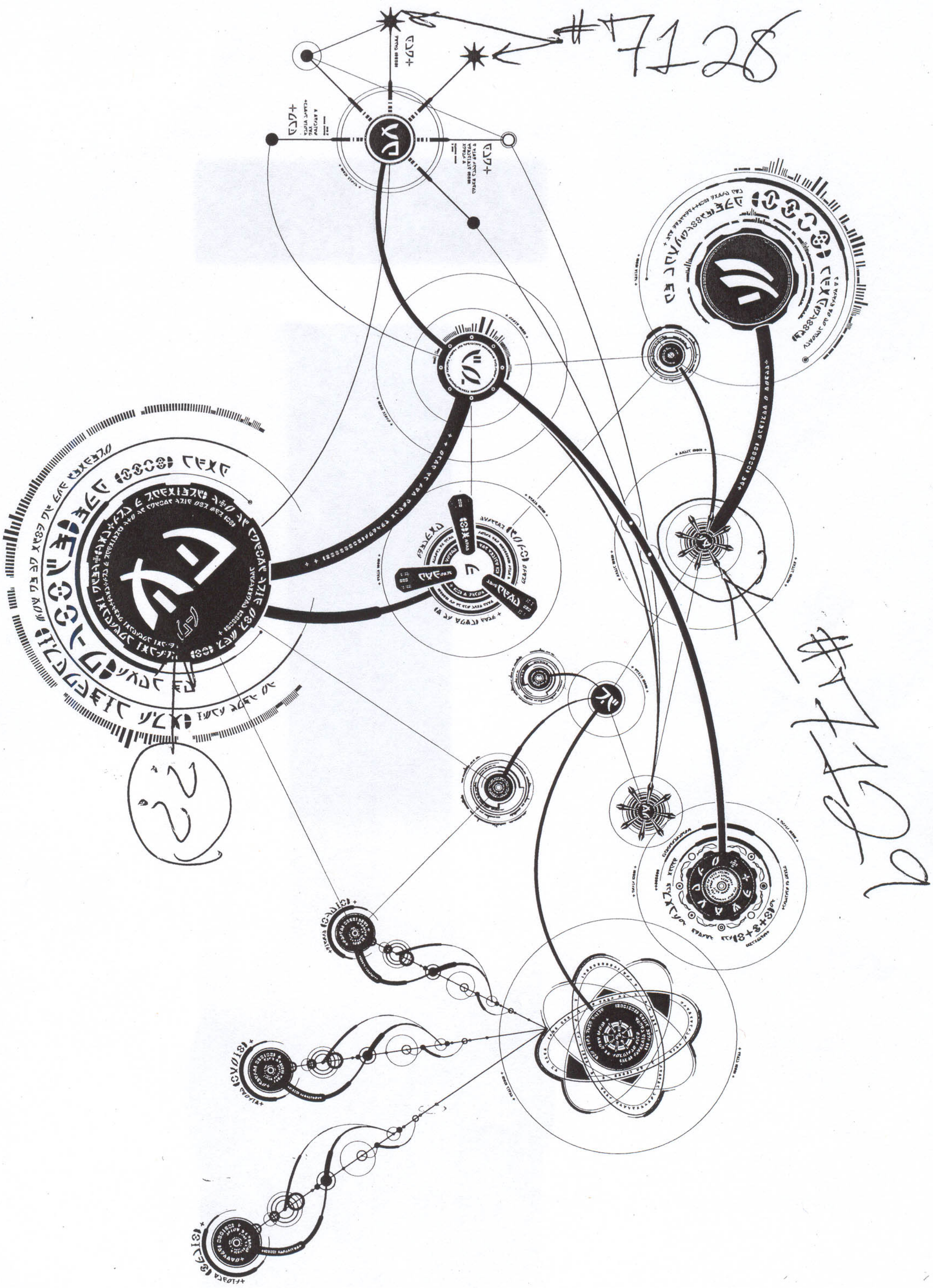

Figure 14.11
Full view of diagram D39-08-117c.

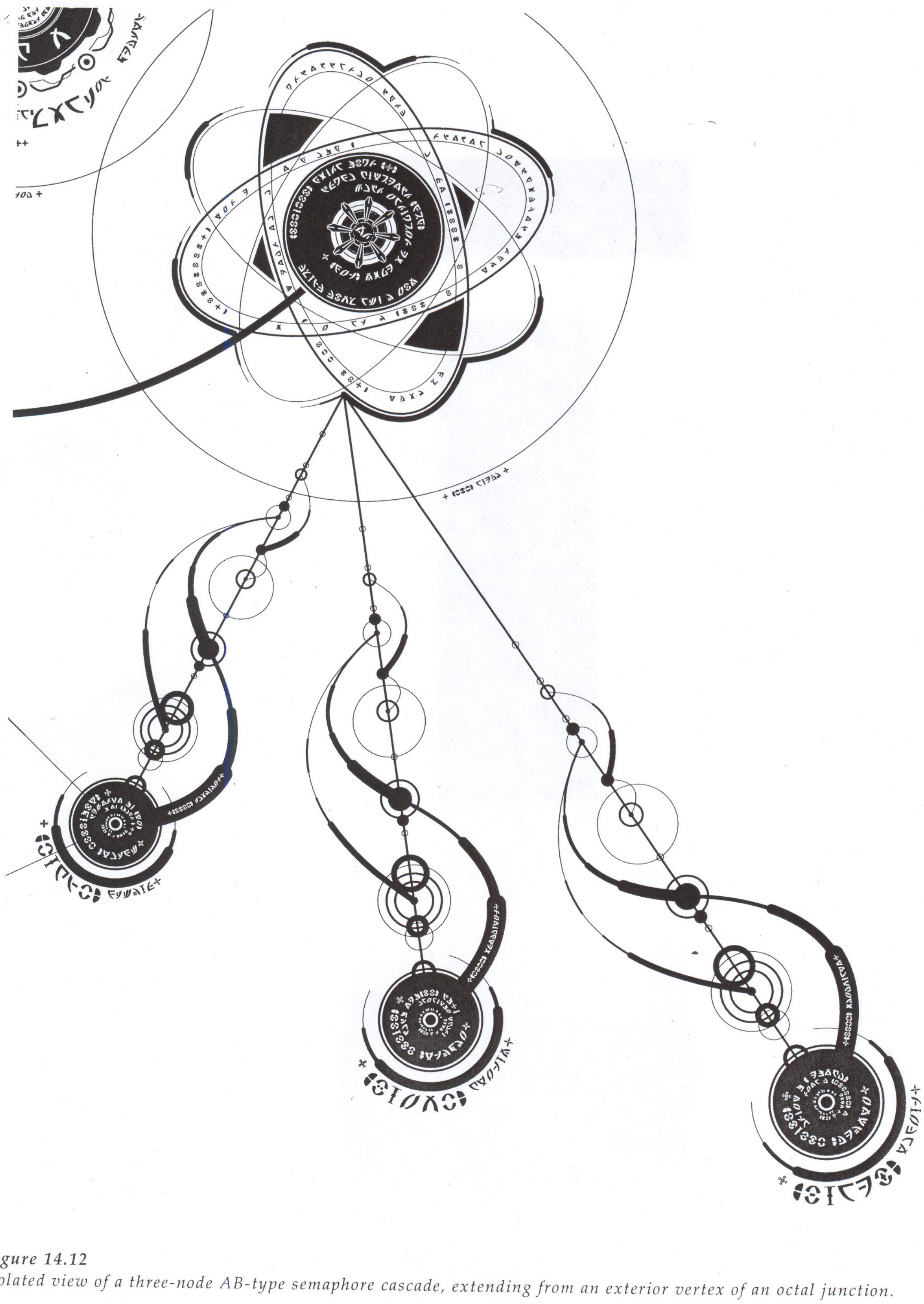

Figure 14.12
Isolated view of a three-node AB-type semaphore cascade, extending from an exterior vertex of an octal junction.

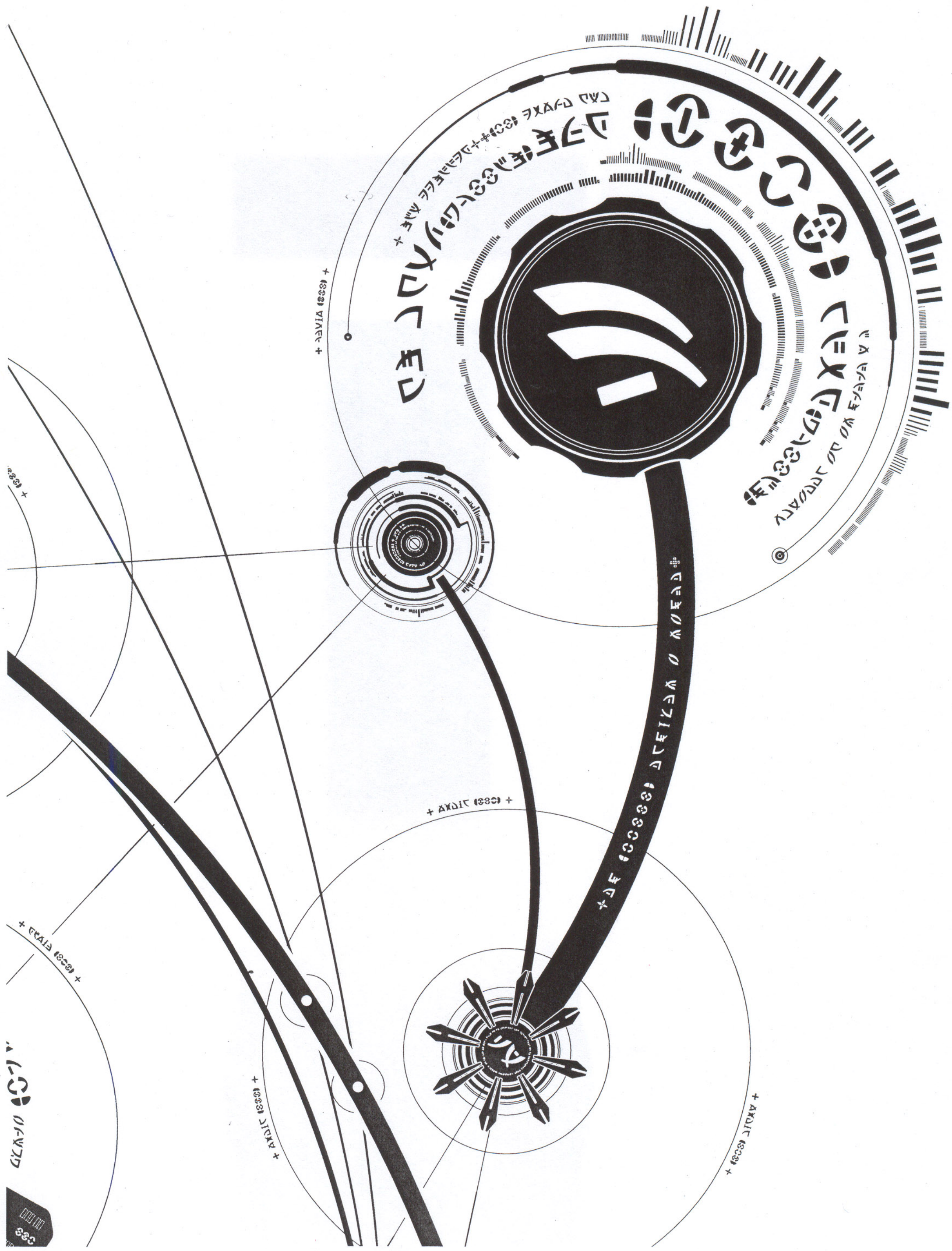

Figure 14.13
Rotary junction with orbital sub-junction connecting to an octal switch.

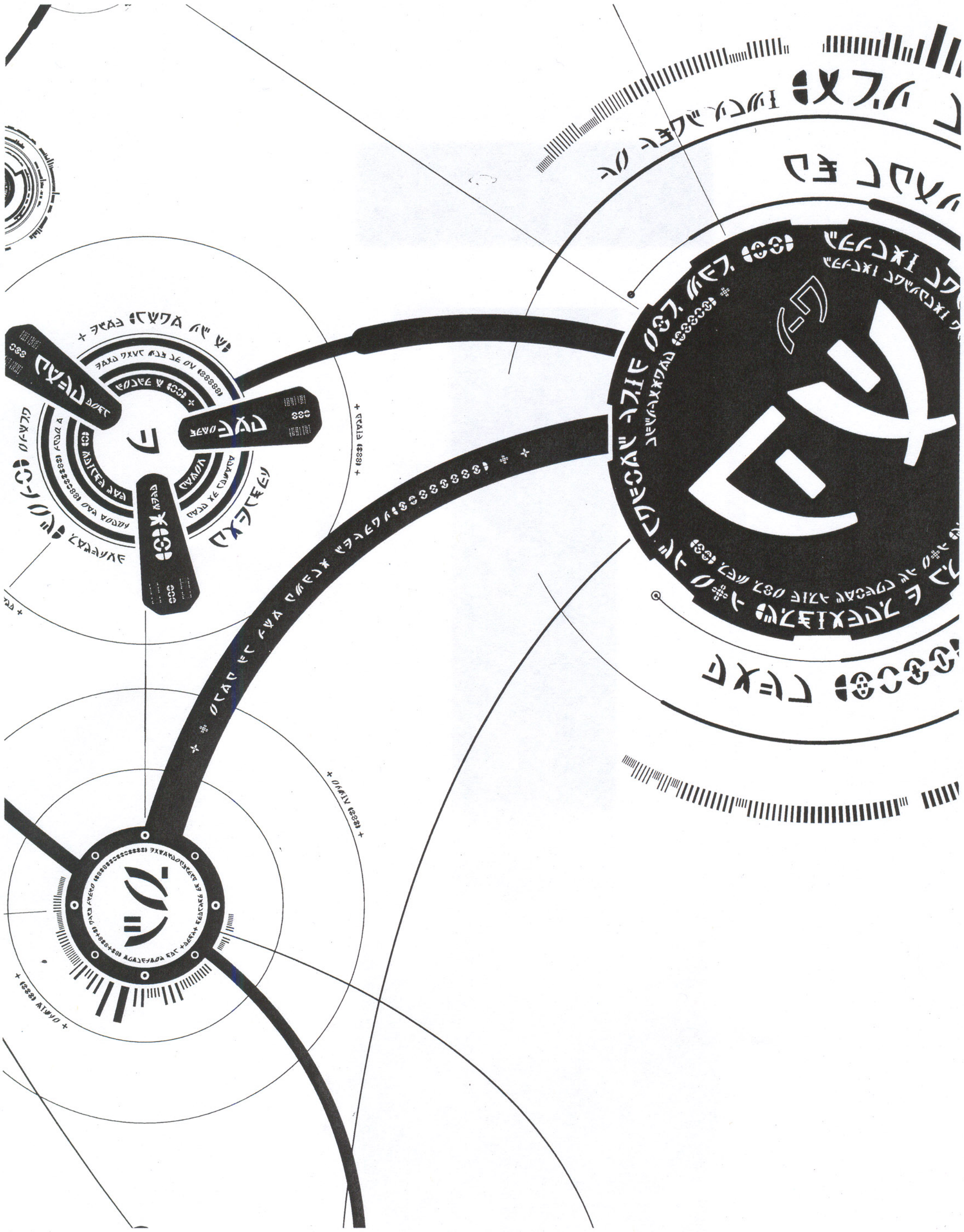

Figure 14.14
Compound junction in a dual-link union with heavy-state tri-switch and diffuser.

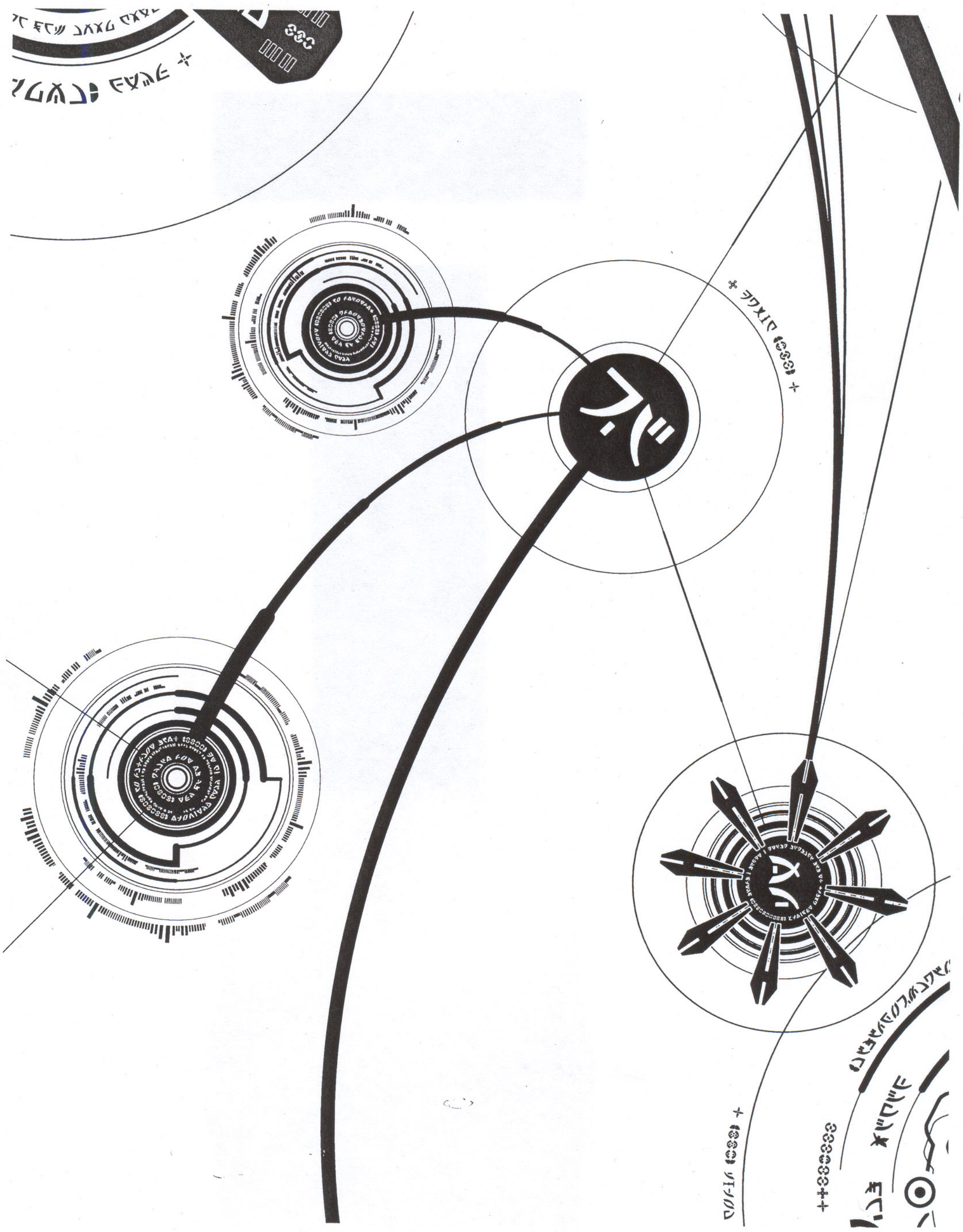

Figure 14.15
Parent junction with three non-orbital child junctions.